

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A communications network comprising:

two or more ~~cell-sites~~ points of presence for communication with wireless terminals, each point of presence represents a cell site, each point of presence having multiple receive antennas which provide diversity reception of wireless signals at the point of presence;

a central site having one or more controllers, the one or more controllers comprise a selection system, the selection system carries out macro-diversity selection using a cell selector and micro-diversity selection using an antenna selector; and

a switch system through which receive signals from each of the multiple receive antennas of each ~~cell-site~~ point of presence are connected to the selection system, wherein based on analysis, at the selection system at the central site, of the receive signals from each of the multiple receive antennas of each ~~cell-site~~ point of presence: (a) the cell selector performs the macro-diversity selection to counter macro spatial effects in the communications network, and selects one of the ~~cell-sites~~ points of presence from the two or more ~~cell-sites~~ points of presence for reception from a particular wireless terminal, and (b) the antenna selector performs the micro-diversity selection to counter micro spatial effects in the communications network, and selects one of the receive antennas of the multiple receive antennas of the selected ~~cell-site~~ point of presence, such that the antenna selector selects a micro-diversity channel from each point of presence from among at least two micro-diversity channels from each point of presence, and the cell selector selects a macro-diversity channel from among the selected micro-diversity channels.

2. (currently amended) A communications network according to claim 1, wherein:

the switch system presents all receive signals from the multiple receive antennas at each ~~cell-site~~ point of presence to the selection system at the central site for use by the antenna selector in selecting the micro-diversity channel from each point of presence from among the at least two micro-diversity channels from each point of presence, and for use by the cell selector in selecting the macro-diversity channel from among the selected micro-diversity channels.

3. (cancelled)

4. (previously presented) A communications network according to claim 1 wherein the one or more controllers include transceivers that transmit and receive RF signals according to different respective wireless LAN protocols that are used by different wireless terminals.

5. (currently amended) A communications network according to claim 1 wherein the central site is connected to the two or more ~~cell sites~~ points of presence via optical fibers, and each ~~cell site~~ point of presence comprises an optical transmitter and an optical receiver.

6.-12. (cancelled)

13. (currently amended) A communications network according to claim 1, wherein the multiple receive antennas of each point of presence includes ~~the at least one of the cell sites~~ include first and second receive antennas, the communications network further comprising, for each point of presence:

~~of one of the cell sites, and the at least one of the cell sites includes~~ a first electric-to-optical converter associated with the first receive antenna, and a second electric-to-optical converter associated with the second receive antenna; ~~the communications network further comprising:~~

an optoelectronic port having at least first and second optical receivers;

a first optical fiber coupled between the first optical receiver and the first electric-to-optical converter to carry a receive signal of the first receive antenna; and

a second optical fiber coupled between the second optical receiver and the second electric-to-optical converter to carry a receive signal of the second receive antenna.

14. (currently amended) A communications network according to claim 13, wherein, for each point of presence, the antenna selector selects one of the receive antennas by selecting a signal from a set of signals which includes signals of the first and second optical receivers.

15. (currently amended) A communications network according to claim 13, further comprising, for each point of presence:

a transmit antenna; ~~at the at least one of the cell sites~~;

an optical-to-electric converter associated with the transmit antenna; and

an optical transmitter associated with the optoelectronic port;

wherein the optical transmitter is coupled to the optical-to-electric converter of the transmit antenna to carry a transmit signal of the transmit antenna by sharing at least part of the first optical fiber with the receive signal of the first receive antenna.

16. (previously presented) A communications network according to claim 1, wherein:

signals of the multiple receive antennas are received at the antenna selector; and

the antenna selector selects the one receive antenna of the multiple receive antennas by selecting one of the signals of the multiple receive antennas and passing the selected one of the signals of the multiple receive antennas to the cell selector.

17.-21. (cancelled)

22. (previously presented) A communications network according to claim 1, wherein:

the one or more controllers are provided in a network interface card.

23. (currently amended) A communications network according to claim 22, wherein:
the network interface card comprises a MAC processor for analyzing packets received from each ~~cell site~~ point of presence according to a wireless LAN protocol.

24. (previously presented) A communications network according to claim 23, wherein:

the wireless LAN protocol is IEEE 802.11.

25. (previously presented) A communications network according to claim 1, further comprising:

at least one network interface card, the at least one network interface card comprises the one or more controllers, a baseband modem for conversion of digital signals to and from quadrature form, a stage for modulation and demodulation of quadrature signals, and an input/output port for connection to a server.

26. (new) A communications network according to claim 1, wherein:

for each point of presence, the multiple receive antennas include first and second receive antennas which provide diversity reception of wireless signals at the point of presence in a first frequency band according to a first wireless LAN protocol, and third and fourth receive antennas which provide diversity reception of wireless signals at the point of presence in a second frequency band according to a second wireless LAN protocol.

27. (new) A communications network according to claim 26, wherein:

the first wireless LAN protocol is IEEE 802.11a and the second wireless LAN protocol is IEEE 802.11b.

28. (new) A communications network according to claim 26, wherein:

the first frequency band is a 5.2 GHz band, and the second frequency band is a 2.4 GHz band.

29. (new) A communications network according to claim 26, wherein:

signals received by the first and third receive antennas are carried by a first optical fiber to an opto-electronic port; and

signals received by the second and fourth receive antennas are carried by a second optical fiber to the opto-electronic port.